

Work Order ID 163757

163757

Friday, July 07, 2017 10:00:18 AM

Item ID: D4720-1

Revision ID:

Item Name: Spacer

Start Date: 7/7/2017 Start Qty: 600.00

Required Date: 7/28/2017 Req'd Qty: 600.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

N9000040100

Setup Start ***NS1***

Stop ***NS2***

Cust Item ID:

Customer:

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4720	A

100

0.00

100

Hardinge

Hardinge CNC Lathe Small

Hardinge CNC LATHE SMALL

Memo

5.21

1- Machine as per Folio FB0

FOLIO REV: AA

DWG REV: A

DO NOT CHAMFER OUTSIDE DIA

PART-OFF AT MAX TOL at 3.210" **

2- Deburr

600 0 17/07/23

DAS
33
9-89

110

0.00

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

6.00

600 0 17/07/23

DAS
33
9-89

DAS
13
9-89

491 PCS

600

600

Accept

AUG 25 2017

[Signature]

Work Order ID 163757

Friday, July 07, 2017 10:00:18 AM

163757

Page 2

Item ID: D4720-1 Accept ***N9000040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Spacer
Start Date: 7/7/2017 Start Qty: 600.00 ***600*** Cust Item ID:
Required Date: 7/28/2017 Req'd Qty: 600.00 ***600*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 12.00				600	0		DAS 45 9-89 2017-7-23
130 *130* Outsource1 Outsource process - Heat Treat	Outsource process - Heat Treat Memo ***HEAT TREAT AS PER DWG D4720***	0.00 108,000.00							491 AUG 15 2017 DAS 13 9-89 491X SP17-8-25 2017/07/27
140 *140* Packaging Packaging	Receive & Inspect for Damage & Mat'l Certs Memo	0.00 12.00							

163757

Page 3

N900040100

Setup Start *NS1*

Stop *NS2*

600

600

Reference:

Run Start *NR1*

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

0.00

0.00

AUG 28 2017

0.00

3.02

WASH SPACER AS PER OSI005

0.00

6.00

***STOCK IN SKIDTUBE CELL**
LOCATION : LG001

Work Order ID 163757

Friday, July 07, 2017 10:00:18 AM

163757

Page 4

Item ID: D4720-1 Accept ***N9000040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Spacer
Start Date: 7/7/2017 Start Qty: 600.00 ***600*** Cust Item ID:
Required Date: 7/28/2017 Req'd Qty: 600.00 ***600*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200	QC21- Final Inspection - Work Order Release	0.00							
200									
QC	Memo	60.00							
Quality Control									

17/9/5 *[Signature]*

U 17-08-29

Picklist Print

Friday, July 07, 2017 10:00:16 AM

Page 1

Work Order ID: 163757

163757

Parent Item: D4720-1

D4720-1

Parent Item Name: Spacer

Start Date: 7/7/2017

Required Date: 7/28/2017

Start Qty: 600.00

Required Qty: 600.00

Comments: IPP REV:A 12.11.20 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T0.375W.058		Purchased	No			100	f	60.0001	0.265	167.3684		DAS 33 9-89	
M6061T6T0.375W.058										**			
6061-T6 RD Tube .375 x.058W													

Location

Loc Qty

Loc Code

MAT013

60.0001

m137169

0.0001

m137477

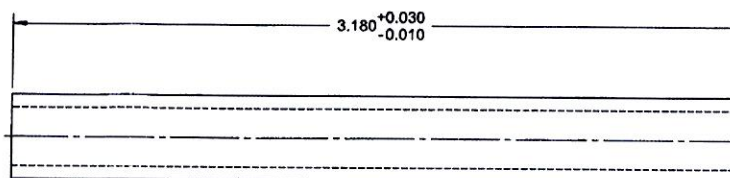
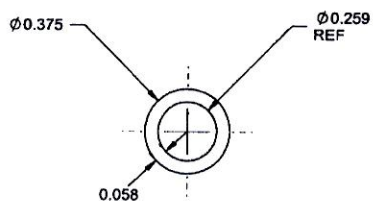
60

M130083

102'

44,950'

17107/23



D4720-1 SPACER

W/O 103757

RELEASE
2012-11-16

NOTES:

- 1) MATERIAL: 6061-T4-T42 ALUMINUM TUBING PER WW-T-700/6, AMS 4081, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T4T0.375W.058
OR
6061-T6-T62 ALUMINUM TUBING PER WW-T-700/6, QQ-A-200/8, QQ-A-225/8, AMS 4080 / 4082, OR ASTM B210 / B221 / B241
REF DART SPEC M6061T6T0.375W.58
HEAT TREAT TO -T4/-T42 CONDITION. MIN UTS = 30 KSI (60 HREW MIN)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.02 lbs

A		NEW ISSUE		RP	12.09.10
REV.		DESCRIPTION		BY	DATE
DESIGN	RP	DART AEROSPACE LTD		REV. A	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA		SHEET 1 OF 1	
CHECKED		DRAWING NO.			
MFG. APPR.		D4720			
APPROVED		TITLE	SCALE		
DE APPR.		SPACER	NTS		
DATE	12.09.10	COPYRIGHT © 2012 BY DART AEROSPACE LTD			



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID **PO37234**

Purchase Order Date 7/27/2017

PO Print Date 7/27/2017

Page Number 1 of 3

Order From :

VC-MET004

Ship To : DART AEROSPACE LTD

METCOR INC.
560 BOUL. ARTHUR SAUVE
SAINT-EUSTACHE, QC J7R 5A8
CA

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA



Contact Name

Vendor Phone 450 473 1884

Ship To Contact

Ship To Phone

Ship Via: FedEx PI collect

Ship Acct:

Buyer

Diane Baker

Customer POID

Customer Tax # 10127-2607

Terms

Net 30

Currency

CAD

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ Taxable Promise Date	CD	Req Qty/ Unit of Measure	PO Unit Price	Extended Price
1	163757	D4720-1 Spacer.	8/2/2017 Yes 8/2/2017		600.00	\$0.00 1.0062	\$0.00 603.72
Heat treat to -T4/-T42 Condition, Min. UTS=30KSI (60 HREW MIN.) As per dwg D4720 REV. A Note: Detail C of C Required Part are made from 6061-T6 MAT'L							
Line Total:							603.72 \$0.00
2	163783	646.9711 Blade	8/2/2017 Yes 8/2/2017		15.00	\$0.00 11.1481	\$0.00 167.22
FINISH: HEAT TREAT TO 58-62 RC ROCKWELL HARDNESS As per dwg 646.9700 REV. D2 PART ARE MADE FROM AISI A2 TOOL STEEL DETAIL OF C OF C REQUIRED							
Line Total:							\$0.00 167.22

Note:

7/27/2017

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
320865	1	121375

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
37234		AL-6061	2017/7/28	FEDEX

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
----------------------	-------------------------	--------------------------------	---	-----------------

645 D4720-1
(600) D4720-1 SPACER
REF. 163757
PER DWG.D4720 REV. : A
(45) D5518-1 CROSSBOLT SPACER
REF. 164099
DW. 5518 REV. : A4

10,

SP-8-70

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
BOITE DE CARTON	1	

EMPAQUETAGE Packing	
------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 645

POIDS EXPÉDIÉ / Weight Shipped : 10,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

QUANTITÉ EXPÉDIÉE Quantity Shipped: 645

POIDS EXPÉDIÉ / Weight Shipped : 10,00

Signature:

Date:

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conform

Certificate of Compliance

BON DE TRAVAIL order	CHARGE MI load
320865	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
37234	N/A	AL-6061	N/A	N/A

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SOL ANNEAL

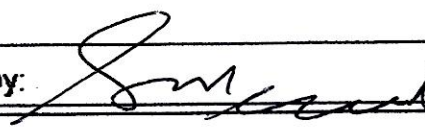
SINGLE AGING TO CONDITION T42

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / result
CONDUCTIVITY	38 - 44 %IACS	130	39 - 40 %IACS
HARDNESS		130	66,5 - 68 HREW
MESURE EN HR15TW = 66-67 HR15TW			

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
645	10	D4720-1 (600) D4720-1 SPACER REF. 163757 PER DWG.D4720 REV. : A (45) D5518-1 CROSSBOLT SPACER REF. 164099 DW. 5518 REV. : A4

g. n. o. u. t

COMMENTAIRES / comments

APPROUVÉ par / Approved by: 		DATE: 2017-08-08
---	--	------------------

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détail

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320865	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
37234	N/A	AL-6061	N/A	N/A

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SOL ANNEAL

SINGLE AGING TO CONDITION T42

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCT	36 - 44 %IACS	130 (60 kHz)	39 - 40 %IACS
HARDNESS	60 HREW MIN	130	66.5 - 68 HREW MESURE EN HR15TW = 66-67 HR15TW

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
645	10	D4720-1 (600) D4720-1 SPACER REF. 163757 PER DWG.D4720 REV. : A (45) D5518-1 CROSSBOLT SPACER REF. 164099 DW. 5518 REV. : A4

COMMENTAIRES / comments

SOL. ANNEAL 985F, 35 MIN

AGE HARDEN AMBIANT, 96 HRS

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

This document and any attached documents may contain confidential or proprietary information and may be subject to export control laws and regulations. If you are not the intended recipient, you are notified that any dissemination, copying of this e-mail and any attachments thereto or use of their contents by any means whatsoever is strictly prohibited. Unauthorized export or re-export is prohibited.

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

Ce document et les documents qui lui sont joints peuvent contenir des informations confidentielles, être soumis aux réglementations relatives au contrôle des exportations ou ayant un caractère privé. S'ils ne vous sont pas destinés, nous

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
320865	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

vous signalons qu'il est strictement interdit de les divulguer, de les reproduire ou d'en utiliser de quelque manière que ce soit le contenu. Toute exportation ou réexportation non autorisée est interdite.

APPROUVÉ par / Approved by:

Isabel Otero

Isabel Otero
QA Technician

DATE: 2017-08-08

